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**Preliminary Current Catalog of Solar Flare Events with X-ray Classes M1 - X>17.5
XXIV Cycle of Solar Activity (I.2009 - I0.2017.....)**

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DATE: y m d - year, month and day of the flare event began.

TIME (UT): - the begin, peak, and end times of the flare event. The begin time is defined as the first minute
to, tm, te in a sequence of 4 minutes of a steep monotonic increase (0.1-0.8 nm = 1-12.5 keV) in X-ray flux,
but if the Ha-flare begins more early, then 'to' is the start time of Ha-flare.
In this case the optical importance is put by the first. The X-ray maximum is taken as the minute
of the peak X-ray flux. The end time is the time when the flux level decays to a point halfway
between the maximum flux and the pre-flare background level X-ray or the time of the Ha-flare,
when the duration of Ha-flare more than the duration of X-ray burst.

CLASS,

IMPORTANCE: - X-ray class and optical importance of the flare event. The field 'opt' is blank for X-ray events
X-ray/opt with no optical correlation (no optical flare observed or no optical patrol at the time and for
flares that occur in unassigned regions).
The X-ray flare classification by peak flux range (0.1-0.8 nm = 1-12.5 keV) in mks system ($W \cdot m^{-2}$):
A - $<10^{-7}$; B - 10^{-7} - 10^{-6} ; C - 10^{-6} - $<10^{-5}$; M - $5 \cdot 10^{-5}$ - $<10^{-4}$; X - $>10^{-4}$.
Importance is the corrected area of the flare in heliospheric square degrees at maximum brightness,
observed in the Ha line (656.3 nm):
S - Subflare (area <2.1 deg²);
1 - Importance 1 (2.1 $<$ area <5.1 deg²);
2 - Importance 2 (5.2 $<$ area <12.4 deg²);
3 - Importance 3 (12.5 $<$ area <24.7 deg²):
4 - Importance 4 (area >24.8 deg²).
Brightness is the relative maximum brightness of flare in Ha: F - faint; N - normal; B - brilliant.

IF: $J \cdot m^{-2}$ - the integrated X-ray flux from the start, through a maximum, and up to 0.5 maximum,
in joule multiplied by m (meter) in the minus of the second degree.

COORDINATES: - lt (heliographic latitude) - the distance in degrees from the solar equator.
lt, lg, L lg (central meridian) - the distance in degrees from a line extending from the north solar rotational
pole to the south solar rotational pole through the center of the solar disk as viewed from Earth.
L - (Carrington longitude) - the heliographic longitude of solar feature in the coordinate system
that rotates with the Sun.
The spherical, heliographic coordinates of the flare event are determined either from the flare image
in the Ha line or from the X-ray burst image, or calculated from the position of the active region,
both on the visible disk of the Sun and beyond the limb.

In the latter case, small letters are used.

According to:

<https://www.ngdc.noaa.gov/stp/space-weather/solar-data/solar-features/solar-flares/h-alpha/reports/soon/>,
<http://legacy-www.swpc.noaa.gov/weekly/index.html>) and
<https://www.ngdc.noaa.gov/stp/space-weather/solar-data/solar-features/solar-flares/x-rays/goes/>.

- AR - SWPC NOAA-assigned solar active region number.
- RADIO MHz: - Peak Radio Flux is the peak value above pre-burst background of associated radio bursts at
245 2695 frequencies of 245 and 2695 MHz in solar flux units (sfu), ($1 \text{ sfu} = 10^{-22} \cdot \text{W} \cdot \text{m}^{-2} \cdot \text{Hz}^{-1}$).
- RADIO SWEEP - the intensity is a relative scale from 1 (minor) to 3 (major) of any sweep radio event associated with the energetic event, as follows:
Type II: Slow drift burst.
Type IV: Broadband smooth continuum burst (<http://legacy-www.swpc.noaa.gov/weekly/index.html>).
- CME: - Coronal Mass Ejection:
to, v, da, pa to - onset time, earliest indication of liftoff;
v - median velocity (km/s);
da - angular width (degrees);
pa - position angle measured from solar north in degrees (counter-clockwise);
CME on LASCO CME - list: https://cdaw.gsfc.nasa.gov/CME_list/;
c - preliminary CME - list: <http://sidc.oma.be/cactus/catalog.php>;
g - no data, g(6/06-8/01) - there are no data from 06d06h to 08d01h.
- X-ray hard: - An: R - Space satellite RHESSI (The Reuven Ramaty High Energy Solar Spectroscopic Imager)
An, tm, Emax http://hesperia.gsfc.nasa.gov/hessidata/dbase/hessi_flare_list.txt;
n - number of hard X-ray bursts in the flare event - RHESSI analysis;
tm - time of maximum intensity of the hardest X-ray burst in this flare event;
Emax - maximal energetic band of the hardest X-ray in the flare event in keV.
g - no data, g(6/06-8/01) - there are no data from 06d06h to 08d01h.
- PROTONS: - D - day of Solar Proton Event flux maximum;
D, tmax, Ipr tmax - time of proton ($E > 10$ MeV) maximum;
Ipr - proton flux for ($E > 10$ MeV), given in particle flux units ($1 \text{ pfu} = 1 \text{ p}/(\text{cm}^2 \cdot \text{s} \cdot \text{sr})$).
We defines the start of a proton event to be the first of 3 consecutive data points with fluxes greater than or equal to 1 pfu.
- GLE - Ground Level Event.
- n - solar neutrons registration.
- Attendant phenomena - active dynamic phenomena, constituting the flare event:
WL - white light event;

SPY - spray;
 DSF - solar filament ejection;
 LPS - loop prominens system;
 EPL - eruptive prominens on limb.

- * - before 'to' of flares means, that all given flares are component of one flare event.
- ? - after hard X-ray burst means, that time of a maximum of its realization is close, but is not entered during realization flare events.
- ? - after CME: there are doubts about the identification of the CME.
- ? - afer AR: there are doubts about the identification of active region.

2010

D A T E		T I M E			CLASS		COORDINATES			AR	RADIO MHz		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO	SWEEP	to / v / da / pa	An / tm / Emax,	E>10MeV	GLE	n	phenomena	
						X-ray/opt	J·m ⁻²				sfu	km/s		keV		D tmax/Ipr					
20100119	1303	1341	>1350	M2.3	.039	S25E88L053	11041								1406/0153/044/101	R2	/1341/012-025				
20100119	2023	2035	>2046	M1.7	.018	S28E88L053	11041								2058/0253/041/255?	R	/2027/012-025				
20100120	0645	0727	0735	M1.0/SF	.019	S24E87L053	11041									R2	/0708/012-025				
20100120	0742	0749	0758	M1.6/SF	.012	S24E88L053	11041														
20100120	1046	1059	>1110	M1.8	.017	S24E86L053	11041								1130/0101/046/099	R	/1049/012-025				
20100120	1750	1755	1810	M3.4/SF	.017	S26E81L053	11041									R	/1755/012-025				
20100206	1847	1859	1933	M2.9/SN	.026	N21E15L253	11045				54				2006/0240/097/083	R	/1857/012-025				
20100206	2131	2137	>2142	M1.3	.0074	N21E15L253	11045														
20100207	0220	0234	0303	M6.4/1N	.037	N21E11L253	11045	170			420		IV/2		0354/0421/360/113	R	/0245/012-025				
20100208	0736	0743	>0746	M4.0	.13	N22W04L253	11045	150			290					R4	/0741/050-100				
20100208	1157	1203	>1206	M1.1	.003	N24W06L253	11045									R5	/1251/006-012				
20100208	1332	1347	>1350	M2.0	.0082	N25W08L253	11045									R	/1355/006-012?				
20100208	2101	2123	2140	M1.0/2F	.004	N28W12L250	11045														
20100212	1119	1126	>1140	M8.3/1N	.019	N26E11L185	11046	350			660				1342/0509/360/044	R	/1126/050-100				
20100212	1752	1808	1841	M1.1/2F	.006	N22W53L250	11045														
20100505	1713	1719	1735	M1.2/SF	.003	N42W37L225	11069								1754/0231/023/228	R	/1718/025-050				
20100612	0030	0057	0113	M2.0/SN	.007	N23W43L099	11081	27000			130	II/2			0131/0486/119/294	R	/0057/003-006				DSF?
20100613	0530	0539	>0544	M1.0/SF	.004	S25W84L123	11079	180				II/1			0606/0320/033/253	R	/0538/003-006				
20100807	1755	1824	1955	M1.0/2F	.018	N11E34L348	11093	120			100	II/2	IV/2		1836/0871/360/094	R2	/1813/012-025				
20101016	1907	1912	1930	M2.9/1N	.064	S20W26L202	11112					II/3			2012/0350/032/274	R	/1912/050-100				
20101104	2330	2358	>0012	M1.6/SF	.014	S20E76L211	11121								0126/0313/011/109	R	/0010/012-025				
20101105	1243	1329	>1400	M1.0	.023	S20E69L211	11121									R2	/1326/012-025				
20101106	1527	1536	1711	M5.4/1N	.026	S19E58L211	11121	100							1612/0178/033/116	R3	/1528/006-012				

2011

DATE		TIME			CLASS	COORDINATES		AR	RADIO MHz		DYNAMIC EVENT		CME	X-ray hard		PROTONS		Attendant	
y	md	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO SWEEP	to / v	/ da / pa	An / tm / Emax,	E>10MeV	GLE	n	phenomena
					X-ray/opt	J·m ⁻²				sfu			km/s		keV	D tmax/Ipr			
20110128	0044	0103	>0110	M1.3	.093	N16W90L343	11149					II/1	0126/0606/119/290		R2 /0056/025-050	28 1625/0003			DSF
20110209	0123	0131	>0135	M1.9/SF	.0063	N17W72L172	11153												
20110213	1728	1738	1846	M6.6/1N	.040	S20E04L036	11158	9900	210		II/1	IV/2	1836/0373/276/089						
20110214	1720	1726	1804	M2.2/1N	.009	N56W18L034	11158					II/2	1824/0326/360/315	R	/1728/006-012				
20110215	0144	0156	>0206	X2.2	.160	S20W15L034	11158	45000	1300		II/2	IV/2	0224/0669/360/189	R	/0156/050-100	15 1115/0002			WL DSF
20110216	0132	0139	>0146	M1.0	.0051	S20W24L034	11158						0236/0411/092/035	R	/0138/025-050				
20110216	0735	0744	>0755	M1.1	.0086	N10E25L331	11161							R	/0748/012-025				
20110216	1419	1425	1436	M1.6/1F	.0044	S20W32L034	11158	9900	330		II/3	IV/1	g(16/13-16/21)	R	/1425/025-050				
20110218	0955	1011	>1015	M6.6	.0019	S20W53L034	11158	230					1212/0350/089/272?	R2	/1011/050-100				
20110218	1023	1026	>1037	M1.0	.007	N10E02L334	11162												
20110218	1259	1303	>1306	M1.4	.0033	S20W54L034	11158							R	/1303/025-050				
20110218	1400	1408	>1415	M1.0	.005	N10W01L336	11162						1712/0259/099/310?	R	/1408/012-025				
20110218	2056	2104	>2114	M1.3	.0095	N10W04L336	11162							R	/2103/006-012				
20110224	0723	0735	>0742	M3.5	.020	N14E87L179	11163	800	180		II/2	IV/1	0748/1186/158/096	R	/0732/050-100				
20110228	1238	1252	>1303	M1.1	.0091	N24E40L164	11164	100					1348/0341/030/079	R	/1250/025-050				
20110307	0500	0513	0525	M1.2/1F	.0081	N24W48L164	11164							R	/0511/025-050				
20110307	0749	0754	0803	M1.5/SF	.0037	S20W78L182	11165	110											
20110307	0759	0807	0828	M1.4/1F	.010	N25W47L164	11164	100	100					R	/0820/006-012				
20110307	0914	0920	0931	M1.8/SF	.0089	N23W50L164	11164		190					R	/0919/025-050				
20110307	1345	1430	>1456	M1.9/SF	.062	N10E18L091	11166					II/2	IV/1	1448/0698/261/053	R3	/1409/012-025?			
20110307	1943	2012	>2058	M3.7	.120	N22W67L164	11164	5400	23000		II/3		2000/2125/360/313	R2	/2005/100-300	08 0800/0050		n	DSF
20110307	2145	2150	>2155	M1.5	.0066	S17W82L182	11165							R2	/2149/025-050				
20110308	0224	0229	0238	M1.3/1N	.0032	S18W79L182	11165							R	/0229/025-050				
20110308	0337	0358	>0420	M1.5/1F	.028	S19E69L028	11171		130		II/2	IV/1	0412/0732/260/119	R	/0347/025-050				
20110308	1035	1044	>1055	M5.3/1F	.034	S17W86L182	11165												
20110308	1808	1828	>1841	M4.4	.057	S17W90L182	11165						1900/0283/043/249	R	/1821/050-100				DSF
20110308	1946	2016	>2119L	M1.4	.067	S17W90L182	11165						2012/0702/099/225	R3	/2018/012-025				
20110309	1035	1107	>1121	M1.7/SF	.026	N08W03L093	11166	480					1212/0315/013/235?	R2	/1051/025-050				
20110309	1317	1402	>1413	M1.7/SF	.023	N09W061093	11166					IV/1	1612/0215/018/235?	R2	/1400/025-050				
20110309	2313	2323	0016	X1.5/2B	.067	N08W09L093	11166							R2	/2322/050-100				DSF
20110310	2234	2241	>2249	M1.1/SF	.0058	N08W25L093	11166						0012/0143/014/091?	R	/2240/012-015				
20110312	0433	0443	0454	M1.3/2N	.0079	N05W36L093	11166				II/1								
20110314	1930	1952	2015	M4.2/1N	.010	N18W48L062	11169						2135/0146/044/279	R2	/1951/050-100				
20110315	0018	0022	>0024	M1.0	.0018	N18W55L062	11169							R	/0022/050-100				
20110323	0203	0217	>0224	M1.4	.009	S16E63L200	11176	970					0236/0772/051/131	R	/0204/006-012				
20110324	1201	1207	1217	M1.0/1F	.0033	S16E43L200	11176	910					1248/0540/191/092?	R	/1212/012-025				
20110325	2308	2322	>2330	M1.0/SF	.008	S12E23L200	11176	870	170		II/1	IV/1	0125/0339/012/004?	R	/2319/012-025				
20110415	1702	1712	1844	M1.3/1F	.012	N14W19L338	11190		64				1936/0193/028/114	R2	/1722/012-025				
20110422	0435	0457	0522	M1.8/SN	.029	S18E43L192	11195						0624/0248/060/305?	R	/0448/025-050				
20110422	1547	1553	1641	M1.2/1N	.011	S18E35L192	11195						g	R	/1617/012-025				
20110528	2109	2150	>2201	M1.1/SF	.023	S20E71L037	11226							R2	/2150/012-025				
20110529	1008	1033	1133	M1.4/1F	.038	S22E65L037	11226	100			II/1		1036/0646/119/116?	R	/1031/012-025				
20110607	0616	0641	0809	M2.5/2N	.044	S21W54L037	11226	6400	710		II/2	IV/2	0649/1255/360/250	R2	/0638/050-100	07 1820/0073		n	
20110614	2136	2147	>2210	M1.3/SF	.018	N15E77L165	11236						2236/0313/028/135	R	/2146/050-100	17 ~00/0008			
20110727	1548	1607	1640	M1.1/1N	.013	N20E37L358	11260	140						R	/1605/012-025				

DATE y m d	TIME to tm te			CLASS IMPORTANCE IF X-ray/opt J·m ⁻²		COORDINATES lt lg L		AR	RADIO MHz 245 2695 sfu		DYNAMIC EVENT RADIO SWEEP		CME to v /da / pa km/s		X-ray hard An / tm / Emax, keV		PROTONS E>10MeV GLE n D tmax/Ipr		Attendant phenomena
20120705	0105	0110	0121	M2.4/3N	.0009	S18W26L205	11515									R	/0131/012-025		
20120705	0235	0242	>0247	M2.2	.0097	S17W27L205	11515							g					
20120705	0325	0336	>0339	M4.7	.014	S17W28L205	11515									R	/0336/050-100		
20120705	0615	0658	0743	1F/M1.1	.0085	S18W39L205	11515							0648/0738/056/224		R	/0653/025-050		
20120705	0740	0745	>0748	M1.3	.004	S18W39L205	11515												
20120705	1044	1048	1118	M1.8/SN	.0032	S19W30L205	11515			68						R	/1116/006-012		
20120705	1139	1144	1210	M6.2/1B	.018	S20W32L205	11515			290				1324/0783/056/224		R	/1144/050-100	07 0745/0025	
20120705	1301	1318	1418	2N/M1.2	.015	S16W43L205	11515							1424/0329/010/323?		R	/1314/012-025		
20120705	2009	2014	2100	M1.6/SF	.013	S18W38L205	11515			150						R4	/2038/006-012		
20120705	2137	2145	2243	M1.6/1N	.009	S12W46L205	11515		940	270				2200/0980/094/235		R2	/2227/012-025		
20120706	0137	0140	0156	M2.9/SN	.004	S18W42L205	11515			130						R	/0140/050-100		
20120706	0230	0251	0318	1N/M1.0	.007	S11W55L205	11515							0312/1059/073/237?					
20120706	0807	0823	0925	SB/M1.5	.0053	S17W40L205	11515							1036/0660/063/222		R	/0823/025-050		
20120706	1024	1029	1051	M1.8/1N	.0052	S17W42L205	11515							1124/0218/062/245					
20120706	1324	1330	1355	SF/M1.2	.0021	S20W45L205	11515			55	IV/1			g					
20120706	1848	1855	>1907	M1.3/SF	.083	S18W51L205	11515							g		R	/1855/006-012		
20120706	2301	2308	>2314	X1.1	.043	S17W55L205	11515		270	520	II/3	IV/1		2324/1828/360/233				09 0430/0019	
20120707	0310	0315	>0323	M1.2/SF	.0067	S17W51L205	11515							0436/0441/055/274		R	/0314/025-050		
20120707	0818	0828	>0839	M1.0	.0096	S17E69L088	11520									R	/0824/025-050		
20120707	1057	1103	1117	M2.6/SF	.0083	S19W58L205	11515												
20120708	0541	0546	0643	M1.3/1F	.0060	S13W80L205	11515							0600/0192/037/229		R3	/0824/025-050		
20120708	0944	0953	1010	M1.1/1F	.0044	S21W67L205	11515							1048/0192/037/229		R	/0953/025-050		
20120708	1205	1209	1229	1F/M1.4	.035	S21W69L205	11515									R	/1210/050-100		
20120708	1623	1632	1646	M6.9/1N	.045	S17W74L205	11515		200	640	II/2			1654/1495/157/234				09 0130/0019	
20120709	2303	2307	>2311	M1.1	.0028	S17E38L088	11520							0100/0449/025/236					
20120710	0458	0414	0531	M1.7/SF	.0024	S16E35L088	11520												
20120710	0605	0627	0731	M2.0/1F	.033	S17E30L088	11520							0848/0252/016/131		R	/0625/025-050		
20120712	1537	1649	2041	X1.4/2B	.46	S15W01L088	11520		3900	800	II/2	IV/2		1624/0657/360/229		R3	/1651/050-100	12 2225/0096	
20120714	0426	0458	0526	1F/M1.0	.0061	S16W25L096	11521							0446/0293/010/282		R	/0516/006-012		
20120717	1203	1715	>1904	M1.7/1F	.0021	S28W65L088	11520							1348/0958/176/241				18 0600/0136	
20120719	0417	0558	>0656	M7.7/SF	.0024	S16W90L088	11520		260	1000	II/1	IV/1		0524/1631/360/275		R3	/0530/050-100	19 ~05/0080	
20120727	1717	1726	>1732	M2.8	.016	S22E71L185	11532		290	340	II/1	IV/1		1748/0393/114/124					
20120728	2044	2056	2115	M6.1/2N	.040	S25E54L185	11532		56000	370	II/2	IV/2		2120/0420/360/134		R	/2104/012-025		
20120729	0615	0622	0744	M2.3/1N	.012	S22E49L185	11532			110		IV/2		g		R	/0638/012-025		
20120730	1539	1548	1614	M1.1/SN	.0052	S22E28L173	11536												
20120806	0433	0438	>0441	M1.6	.0041	S17E90L031	11542		5800	84	II/1	IV/1		0512/0198/046/072		R	/0437/050-100		
20120811	1155	1220	>1336	M1.0/2N	.025	S25W41L086	11540							1326/0173/067/208		R	/1216/025-050		
20120817	1312	1319	>1321	M2.4	.0069	N19E90L232	11548			59				1336/0727/170/053		R	/1319/025-050		
20120817	1708	1720	>1723	M1.0	.0061	N19E90L232	11548			140				1736/0865/174/042		R	/1721/012-025		
20120818	0024	0102	0119	M5.5/SF	.029	N19E86L232	11548		460	150				0048/0986/360/043		R2	/0029/012-025		
20120818	0304	0324	0341	M1.8/SN	.0081	N19E86L232	11548		120	100				0336/0834/143/046		R	/0323/050-100		
20120818	1602	1607	1615	M1.0/1N	.0038	N19E86L232	11548		56	56				1624/0734/126/043					
20120818	2246	2254	2310	M1.0/SF	.0051	N19E78L232	11548							2336/0698/118/039		R	/2253/012-025		
20120818	2315	2322	2332	M1.3/SN	.009	N21E76L232	11548		220					2336/0698/118/039		R	/2253/012-025		
20120830	1202	1211	>1214	M1.3	.0039	S27E85L078	11563							g					
20120906	0406	0413	>0420	M1.6	.0075	N03W60L126	11560									R	/0412/025-050		
20120908	1735	1759	>1820	M1.4	.028	S14W40L005	11564									R	/1801/012-025		
20120909	2150	2236	2326	M1.2/1F	.036	S15W62L005	11564									R	/2241/006-012		
20120930	0427	0433	>0442	M1.3	.0069	N13W80L188	11583							0524/0146/040/289		R	/0432/025-050		

2014

DATE			TIME			CLASS		COORDINATES		AR	RADIO MHZ		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO SWEEP	to	v	/da	/pa	An	/tm	/Emax,	E>10MeV	GLE	n	phenomena	
						X-ray/opt	J·m ⁻²					sfu				km/s		keV	D	tmax/Ipr					
2014	01	01	1840	1852	2137	M9.9/2B	.082	S17W47L223		11936								R	/1848/025-050					DSF	
2014	01	02	0224	0233	>0256	M1.7/SF	.027	S05E76L101		11944								g							
2014	01	02	2208	2218	2231	1N/M1.2	.0043	S05E72L101		11944								g							
2014	01	03	1241	1250	>1254	M1.0	.0051	S04E52L101		11944	530							R	/1247/012-025						
2014	01	03	2109	2114	2123	M1.1/SF	.0040	S06E56L101		11944	140							g							
2014	01	04	1016	1025	>1041	M1.3/2N	.014	S05E48L101		11944		140			g(04/10-04/21)			R	/1019/050-100						
2014	01	04	1847	1946	>2023	M4.0	.14	S11E34L101		11944	620	550	IV/1		2123/0977/360/195?			R	/1949/012-025						
2014	01	04	2212	2252	>2322	M1.9	.059	S06E39L101		11944					2312/0567/201/283			R2	/2259/012-025						
2014	01	07	0349	0353	0404	M1.0/1N	.027	N07E08L096		11946								R	/0349/025-050						
2014	01	07	1007	1013	1124	M7.2/2B	.092	S13E11L101		11944	110	480			1036/0451/071/148			R	/1008/100-300						
2014	01	07	1804	1832	2054	X1.2/2N	.25	S15W11L101		11944	7200	8300	II/2		1824/1830/360/231			R6	/1256/012-025		09 0340/1033	GLE			
2014	01	08	0339	0347	>0354	M3.6/SF	.0017	N11W81L180		11947	1300	100	II/2		0412/0643/108/305			R1	/0336/050-100						
2014	01	11	2148	2151	>2153	M1.3/SF	.0018	S07W11L101		11944		94			2224/0330/124/316			R2	/2148/025-050						
2014	01	12	0105	0122	>0139	M1.0	.015	S16E88L114		11967					0212/0687/131/088			R	/0104/012-025						
2014	01	12	0202	0211	>0218	M1.1	.008	S13E88L114		11967					0424/0642/024/079			R	/0152/006-012						
2014	01	12	2205	2210	>2215	M4.9	.016	S14E88L114		11967					0000/0773/039/093			R3	/2207/025-050						
2014	01	12	0402	0409	>0413	M1.5	.0056	S14E88L114		11967					0548/0494/110/071			R	/0415/006-012						
2014	01	12	0725	0731	>0734	M3.6	.0080	S10E75L114		11967	2000				0748/0493/097/059			R	/0732/012-025						
2014	01	12	1134	1138	>1141	M1.4	.0031	S10E72L114		11967					1148/0656/055/066			g							
2014	01	12	1233	1246	>1250	M1.3	.0089	S14E79L114		11967					1536/0543/112/066			R	/1233/012-025						
2014	01	12	1524	1526	1543	M3.5/SF	.0051	S13E88L114		11967	36000	73						R	/1525/050-100						
2014	01	12	1900	1940	1955	M4.9/SF	.031	S14E76L114		11967	140	1700			2057/0206/023/050			R3	/1902/012-025						
2014	01	12	2204	2216	2223	M2.6/1F	.012	S14E75L114		11967					0006/0419/075/097			R2	/2203/050-100						
2014	01	13	0633	0639	>0706	M2.1/SF	.008	S15E54L114		11967					0736/0280/011/130			R	/0707/012-025						
2014	01	13	0754	0811	0825	M1.1/SF	.025	S12E52L114		11967		69			0824/0458/360/112										
2014	01	13	1548	1611	1619	M6.6/2N	.097	S13E58L114		11967	200	220			1624/1087/360/117			R	/1618/012-025						DSF
2014	01	13	1532	1542	>1553	M1.1	.0093	N07E34L112		11968					1624/0462/170/023										
2014	02	01	0119	0125	>0138	M1.0/1F	.0077	S11E26L114		11967					0348/0301/031/077			g							
2014	02	01	0645	0723	0843	1B/M3.0	.025	S11E23L114		11967								R7	/0711/025-050						
2014	02	02	0624	0634	0706	M2.6/1B	.009	N12E18L112		11968								R4	/0631/050-100						
2014	02	02	0717	0820	0842	M2.2/1N	.043	S10E14L114		11967					0848/0591/258/235			R3	/0806/025-050						
2014	02	02	0924	0931	1005	M4.4/1B	.020	S11E13L114		11967								g							
2014	02	02	1401	1406	>1409	M1.3	.0034	N12E14L112		11968	92	71						R2	/1407/012-025						
2014	02	02	1624	1629	>1636	M1.0	.0050	N09E06L112		11968					1724/0463/143/224			R	/1623/012-025						
2014	02	02	1805	1811	>1818	M3.1	.014	S10E08L114		11967		180						R	/1801/025-050						
2014	02	02	2124	2204	>2214	M1.3	.028	S10E01L114		11967					2348/0199/030/123			R2	/2203/025-050						
2014	02	04	0116	0123	0254	M3.8/1B	.025	N09W13L112		11968								R2	/0109/025-050						
2014	02	04	0240	0306	>0348	M1.2	----	S15W03L114		11967								R2	/0245/025-050						
2014	02	04	0357	0400	0428	M5.2/1B	.018	S14W06L114		11967															
2014	02	04	0938	0949	>0958	M1.4	.013	S12W12L114		11967								R	/0930/025-050						
2014	02	04	1455	1602	1712	1N/M1.5	.058	S12W12L114		11967					1636/0368/189/212			R2	/1524/050-100						
2014	02	05	1611	1620	>1642	M1.3	.018	s10w36L114		11967								R	/1641/012-025						
2014	02	06	2256	2305	>2310	M1.5/SF	.0077	S14W48L114		11967		180						R	/2251/025-050						
2014	02	07	0330	0456	0549	2N/M2.0	.014	S15W50L114		11967					0536/0628/015/246			R13	/0442/050-100						
2014	02	07	1025	1029	1045	M1.9/1N	.0028	N09W53L112		11968					1036/0421/011/307			R	/1025/050-100						
2014	02	09	1540	1617	>1652	M1.0	.032	S16E88L318		11976?					1600/0908/360/104			R3	/1557/012-025						
2014	02	11	0314	0331	0400	M1.7/1N	.012	S12E17L356		11974	920	140	II/2 IV/1		0413/0222/081/266			R	/0314/012-025						
2014	02	11	1553	1710	1942	M1.8/2F	.029	S10E21L356		11974	270				1924/0613/271/273			R2	/1630/012-025						

DATE		TIME			CLASS		COORDINATES		AR	RADIO MHz		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	md	to	tm	te	IMPORTANCE	IF	lt	lg	L		245	2695	RADIO SWEEP	to	v	/da	/pa	An	/tm	/Emax,	E>10MeV	GLE	n	phenomena
					X-ray/opt	J·m ⁻²					sfu					km/s		keV	D	tmax/Ipr				
20140212	*0352	0425	0818	M3.7/2N	.043	S12W02L356	11974											R4	/0418/025-050					
20140212	*0654	0658	0909	M2.3/2N	.010	S13W01L356	11974											R5	/0653/012-025					
20140212	1541	1551	>1615	M2.1	.029	S10W04L356	11974			160	40							R	/1538/050-100					
20140213	*0016	0140	0357	2F/M1.8	.014	S12W09L356	11974											R2	/0233/006-012					
20140213	*0241	0251	>0304	2F/M1.0	.011	S11W10L356	11974											R	/0233/006-012					
20140213	0549	0607	>0613	M1.7	.0096	S11W11L356	11974																	
20140213	0805	0812	>0819	M1.0/1N	.0051	S12W13L356	11974																	
20140213	1545	1557	1615	M1.4/SF	.012	S13W24L356	11974											R	/1537/025-050					
20140214	0240	0257	0357	M2.3/2F	.024	S12W25L356	11974			2300								R3	/0221/012-025					
20140214	1229	1240	1255	M1.6/1N	.0081	S15W36L356	11974				59							R2	/1229/025-050					
20140214	1321	1328	>1339	M1.1	.0084	S12W30L356	11974											R	/1328/012-025					
20140214	1633	1639	1645	M1.0/SB	.0031	S13W32L356	11974			810	200							R	/1639/012-025					
20140216	0920	0926	0934	M1.2/SN	.0034	S11E01L291	11977			2400	92	II/2	IV/1											
20140220	0726	0756	0832	M3.0/SN	.063	S11E43L207	11982			250	4	20	II/2					R2	/0737/025-050		20 0925/0022			
20140223	0550	0610	>0636	M1.1	.022	S16E88L110	11990											R2	/0555/025-050					
20140224	1103	1117	>1142	M1.2/SF	.019	S11E88L110	11990											R2	/1128/012-025					EPL
20140224	1200	1205	>1210	M1.3	.0052	S12W18L207	11982											R	/1158/006-012					
20140225	0039	0049	0210	X4.9/2B	.43	S12E82L110	11990			10000	3700	II/3	IV/2					R3	/0037/300-800		28 0845/0103			WL DSF
20140226	<1452	1501	>1528	1N/M1.1	.0074	S13W44L207	11982											R	/1506/012-025					
20140228	0044	0048	0056	M1.1/SN	.0019	S24E53L094	11991																	
20140301	1318	1333	>1340	M1.1	.011	S12W88L207	11982											R	/1336/012-025					
20140302	2311	2319	>2326	M1.1/SF	.0059	N15W74L176	11986											R	/2307/012-025					
20140303	1554	1558	1604	M1.2/SN	.0026	N05W36L136	11989				89													
20140305	0206	0210	>0212	M1.0	.002	S27W08L094	11991			130								R3	/0450/012-025					
20140308	2326	2341	>2350	M1.4	.011	S18E64L323	12002											R	/2328/025-050					
20140309	1326	1358	1425	SN/M1.0	.0055	S17E58L323	12002											R3	/1345/012-025					
20140309	2013	2028	2101	M1.0/SF	.0092	S19E54L323	12002											R3	/2008/025-050					
20140310	0019	0026	~0100	M1.2/SF	.0059	S19E51L323	12002											R3	/0039/006-012					
20140310	0402	0408	>0413	M1.0	.0038	S18E48L323	12002											R2	/0358/012-025					
20140310	1521	1528	>1532	M1.7	.0069	S20E43L323	12002																	
20140310	2245	2300	2333	M1.4/SF	.016	N14W51L051	11996											R2	/2252/003-006					
20140311	0344	0350	0429	M3.5/1F	.013	N13W55L051	11996				110							R2	/0344/025-050					
20140311	1158	1207	>1214	M1.7	.010	S25W86L093	11991											R	/1209/050-100					DSF
20140312	1055	1105	1139	M2.5/SN	.012	N13W69L051	11996																	
20140312	2228	2234	2250	M9.3/SB	.031	N15W78L051	11996				140							R	/2228/050-100					
20140313	1903	1919	>1930	M1.3	.012	N15W87L051	11996											R	/1905/025-050					
20140320	0342	0356	0444	M1.7/1F	.016	S12E75L168	12014						II/1	IV/1				R	/0334/012-025					
20140322	0658	0702	0710	M1.1/1F	.0022	S10W71L277	12011											R	/0657/025-050					
20140328	1904	1918	1939	M2.0/SN	.013	N11W21L145	12017			250			II/2					R	/1911/025-050					
20140328	2344	2351	>2358	M2.6	.013	N10W22L145	12017			2100			II/2					R	/2347/025-050					
20140329	1735	1748	1816	X1.0/2B	.042	N11W32L145	12017			10000	360		II/3					R	/1735/100-300		29 2230/0003			
20140330	1147	1155	1224	1N/M2.1	.015	N08W43L145	12017			200	120		II/2					R	/1216/006-012					
20140331	0720	0807	>0818	M1.4	.019	S13W76L168	12014											R3	/0756/025-050					
20140402	1318	1405	1535	M6.5/2B	.14	N14E53L015	12027			520	3700		II/1	IV/2				R2	/1332/050-100		05 0300/0001			DSF
20140416	1954	1959	2020	M1.0/1N	.0038	S14E09L224	12035			10000			II/2					R	/1955/012-025					
20140418	1231	1303	>1320	M7.3	.11	S18W33L242	12036			160	1000		II/2	IV/2				R	/1250/050-100		19 0105/0058			
20140425	0017	0027	>0038	X1.3/SF	.11	S15W89L204	12046											R	/0012/050-100					
20140506	0841	0903	0937	M1.8/SF	.033	S15W84L056	12051											R	/0916/012-025					
20140506	2201	2209	>2220	M1.0/SF	.0077	S11W89L056	12051											R	/2158/025-050					

DATE		TIME			CLASS		COORDINATES		AR	RADIO MHz		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO SWEEP	to	v	/da	/pa	An	/tm	/Emax,	E>10MeV	GLE	n	phenomena
						X-ray/opt	J·m ⁻²				sfu			km/s	keV		D tmax/Ipr							
20141009	*	0154	0158	>0202	M1.4/1F	.0044	S15W45L120	12182										R	/0154/025-050					
20141009		0641	0659	0721	1N/M1.2	.0076	S18W46L120	12182										R	/0648/025-050					
20141014		1821	1837	>1846	M1.1	.0097	S12E88L252	12192				1300			1848/0848/360/090									
20141014		1907	1921	>0019	M2.2	.31	S11E88L252	12192			160	180					R3	/1907/025-050						
20141016		1258	1303	>1305	M4.3	.0082	S13E88L252	12192		9000	190				1326/0777/033/096			R	/1258/050-100					
20141018		0702	0758	>0849	M1.6/SF	.066	S13E71L252	12192																
20141019		0417	0503	0639	X1.1/SN	.39	S10E58L252	12192							0448/0139/077/116			R	/0547/006-012					
20141020		0854	0911	1003	1N/M3.9	.028	S14E42L252	12192				47						R4	/0958/012-025					
20141020	*	1600	1637	2023	M4.5/2N	.099	S14E37L252	12192				190			1724/0161/029/093			R3	/1619/025-050					
20141020	*	1855	1902	>1904	M1.4/2N	.0052	S15E46L252	12192		14000	120				1912/0187/234/167			R	/1857/050-100					
20141020	*	1953	2004	>2013	M1.7/2N	.015	S14E36L252	12192										R	/1947/025-050					
20141020		2211	2255	0007	1N/M1.2	.017	S14E36L252	12192										R8	/2239/025-050					
20141021		1335	1338	>1340	M1.2	.0014	S14E36L252	12192		42000	510	II/2						g						
20141022		0116	0159	>0228	M8.7	.21	S13E21L252	12192			580		IV/1					R	/0112/050-100					
20141022		0511	0517	>0521	M2.7	.01	S15E14L252	12192										R	/0457/012-025					
20141022		1402	1428	2230	X1.6/2B	.34	S14E13L252	12192			200							R8	/1424/100-300					
20141022		1551	1557	>1603	M1.4	.0075	S11E88L164	12197					II/1		1612/0434/080/100			R	/1551/025-050					
20141023		0944	0950	>0956	M1.1/1F	.0053	S16E03L252	12192										g						
20141024		0737	0748	>0753	M4.0	.023	S19W05L252	12192		1200	150	II/1	IV/1	0800/0677/096/203				R	/0736/050-100					
20141024		2050	2141	0014	3B/X3.1	.86	S16W21L252	12192			210				2148/0184/035/210			R3	/2106/050/100					
20141025		1338	1708	~0007	3B/X1.0	.39	S16W31L252	12192			160							R28	/1631/025-050					
20141026		1004	1056	1253	2B/X2.0	.34	S18W40L252	12192			200							R5	/1012/025-050					
20141026		1708	1717	>1730	M1.0	.0099	S13W38L252	12192			110							R	/1722/012-025					
20141026		1807	1815	>1820	M4.2	.023	S14W37L252	12192										R	/1806/050-100					
20141026		1843	1849	>1856	M1.9	.01	S13S38L252	12192																
20141026		1959	2021	>2045	M2.4	.052	S15W45L252	12192		400								R	/2032/012-025					
20141027	*	0001	0034	>1022	3B/M7.1	.10	S14W44L252	12192										R	/2353/025-050					
20141027	*	0144	0202	>0211	M1.0/3B	.013	S14W44L252	12192										R2	/0126/025-050					
20141027	*	0335	0341	>0348	M1.3/3B	.0073	S13W45L252	12192										R	/0312/025-050					
20141027	*	0552	0715	1348	2B/C9.6	.0037	S18W48L252	12192										R	/0655/025-050					
20141027	*	0959	1009	>1026	2B/M6.7	.093	S18W48L252	12192										R	/0944/025-050					
20141027		1404	1447	<1531	2B/X2.0	.45	S17W52L252	12192			110				1512/0170/055/216?			R2	/1401/050-100					
20141027		~1524	1740	0009	1F/M1.4	.0086	S19W56L252	12192										R2	/1734/025-050					
20141028	*	0215	0242	0427	M3.4/1B	.076	S14W61L252	12192										R	/0238/025-050					
20141028	*	0323	0332	>0341	M6.6/1B	.052	S14W61L252	12192										R3	/0321/025-050					
20141028		1354	1406	>1423	M1.6/SF	.020	S18W73L252	12192			29							R	/1342/025-050					
20141029		0603	0820	>0852	M1.0/SF	.076	S14W74L252	12192										R6	/0602/025-050					
20141029		0954	1001	>1006	M1.2	.0055	S18W77L252	12192										g						
20141029		1419	1433	1507	SF/M1.4	.019	S16W81L252	12192							1512/0192/101/264			R4	/1423/025/050					
20141029		1606	1620	>1633	M1.0	.012	S14W82L252	12192										g						
20141029		1847	1850	>1852	M1.3	.0019	S13W47L252	12192										R	/1847/050-100					
20141029		2118	2122	>2125	M2.3	.0049	S09W88L252	12192										R	/2122/025-050					
20141030		0034	0037	>0040	M1.3	.0027	S14W81L252	12192										R	/0032/100-300					
20141030		0119	0135	>0156	M3.5	.047	S14W86L252	12192										R	/0110/025-050					
20141030		0417	0428	0439	M1.2/SF	.009	S16W89L252	12192										R	/0416/025-050					
20141103		1123	1153	>1217	M2.2	.042	N17E90L015	12205					II/2		1200/0447/196/058			R2	/1114/025-050					
20141103		2215	2240	2322	M6.5/1F	.066	N14E89L012	12205			180	II/1			2313/0638/155/061			R2	/2212/012-025					
20141104	*	0759	0838	>0851	M2.6/SF	.071	N15E82L012	12205							0848/0627/175/065			R	/0755/012-025					
20141104	*	0842	0904	0935	1F/M2.3	.029	N15E82L105	12205										R2	/0849/025-050					

D A T E		T I M E			CLASS		COORDINATES		AR	RADIO MHz		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO SWEEP	to	v	/da	/pa	An	tm	E _{max} ,	E>10MeV	GLE	n	phenomena
						X-ray/opt	J·m ⁻²				sfu				km/s	keV		D	tmax/Ipr					
20151002	1708	1718	>1723	M1.0/SF	.0021	S19W76L106	12422											R	/1717/025-050					
20151004	0234	0241	>0248	M1.0	.005	S20W90L106	12422											R	/0240/025-050					
20151015	2327	2331	>2337	M1.1/SF	.0055	S11E50L162	12434											R	/2331/025-050					
20151016	0611	0616	0620	M1.1/SF	.0036	S11E46L162	12434	1000		90				0724/0388/010/030				R	/0616/050-100					
20151017	2009	2023	>2028	M1.1	.006	S19E88L122	12437							2136/0186/047/110										
20151017	2035	2042	>2046	M1.5	.006	S18E88L122	12437							2348/0164/044/111										
20151031	1748	1752	>1808	M1.0/SF	.0027	N06E51L316	12443							1836/0312/009/019				R	/1752/025-050					
20151104	0320	0326	0334	M1.9/1N	.0052	N15W64L027	12445	56000		220	II/2			0412/0516/343/021				R	/0325/050-100					
20151104	1155	1203	>1219	M2.5/1N	.0073	N12W73L027	12445	3600		28	II/1			1236/0460/064/278				R	/1202/100-300					
20151104	<1327	1352	>1413	M3.7/2B	.059	N09W04L316	12443	1400		340	II/2	IV/1		1448/0701/360/288				R	/1342/050-100					
20151109	1249	1312	>1510	M3.9/2B	.047	S11E41L207	12449							1326/1041/273/137				R	/1311/025-050		10 0020/0004			
20151221	0052	0103	>0111	M2.8	.019	N04E90L329	12472							0127/0389/071/116				R	/0113/012-025					
20151221	1009	1019	>1032	M1.1/1N	.010	N04E85L329	12472							1048/0405/051/117										
20151222	0315	0334	>0348	M1.6/SF	.021	S23E75L332	12473	120						0348/0382/029/111				R	/0323/025-050					
20151223	0023	0040	>0052	M4.7/1F	.049	S22E63L332	12473	500			II/2	IV/2		0126/0544/089/110				R	/0035/050-100					
20151224	0149	0212	>0222	M1.1	.013	S22E50L332	12473											R2	/0210/025-050					
20151228	1120	1245	>1409	M1.8	.110	S20W10L332	12473	470		370		IV/1		1212/1212/360/163				R	/1201/006-012		29	~01/0003		

2016

D A T E		T I M E			CLASS		COORDINATES		AR	RADIO MHz		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO SWEEP	to	v	/da	/pa	An	tm	E _{max} ,	E>10MeV	GLE	n	phenomena
						X-ray/opt	J·m ⁻²				sfu				km/s	keV		D	tmax/Ipr					
20160101	2310	0011	>0101	M2.3	.110	S20W73L332	12473						II/1					R	/2344/006-012		02 0450/0021			
20160212	1036	1047	>1053	M1.0	.0058	N11W14L089	12497											R	/1045/025-050					
20160213	1516	1524	>1550	M1.8/1B	.0043	N13W25L089	12497											R	/1533/025-050					
20160214	1918	1926	>1929	M1.0/SF	.004	N15W47L089	12497											R	/1924/006-012					
20160215	1041	1100	1159	M1.1/1N	.007	N10W52L089	12497							1148/1083/022/287				R2	/1047/050-100					
20160418	0014	0029	>0102	M6.7/1F	.049	N12W62L344	12529			150		120	II/2	IV/2				g						
20160721	0042	0046	>0050	M1.2	.004	N03W42L165	12567	100																
20160721	0134	0149	>0204	M1.0	.012	N02W42L165	12567																	
20160723	0146	0211	>0223	M5.0	.054	N05W73L165	12567	140						0236/0270/038/275										
20160723	*0500	0516	>0524	M7.6/3B	.046	N02W74L167	12567	660		310				0524/0835/117/271				R	/0504/006-012					
20160723	*0527	0531	0533	M5.5/3B	.011	N02W74L167	12567	1400		900	II/1	IV/2												
20160724	0609	0620	0632	M2.0/SF	.017	N03W84L167	12567											R	/1618/050-100					
20160724	1730	1743	>1812	M1.9	.036	N07W89L168	12567							1824/0244/010/277				R	/1738/100-300					
20160807	1437	1444	>1448	M1.3	.0046	N09W67L321	12572							1524/0986/029/239				g						
20161129	1719	1723	1736	M1.0/SN	.002	S07E55L139	12615											R2	/1728/100-300					
20161129	2329	2338	>2340	M1.2/SF	.004	S08E52L139	12615											R	/2306/100-300					

2017

DATE			TIME			CLASS		COORDINATES		AR	RADIO MHZ		DYNAMIC EVENT		CME		X-ray hard		PROTONS		Attendant				
y	m	d	to	tm	te	IMPORTANCE	IF	lt	lg	L	245	2695	RADIO	SWEEP	to	v	da	pa	An	tm	Emax,	E>10MeV	GLE	n	phenomena
						X-ray/opt	J·m ⁻²					sfu				/	/	/	keV	D	tmax/Ipr				
20170401	2135	2148	2240	M4.4/1F	.046	N16W53L054	12644	570						IV/3					R	/2134/050-100					
20170402	0750	0802	0946	2N/M5.3	.044	N12W59L054	12644	100					II/1	IV/1	0824/0868/078/292c				R2	/0742/025-050					
20170402	1252	1300	>1311	M2.3	.016	N14W63L054	12644				110								R	/1318/025-050					
20170402	1818	1838	>1928	M2.1/SF	.061	N16W68L054	12644	230							1924/0405/084/289c				R3	/1807/006-012					
20170402	2026	2033	>2038	M5.7	.022	N16W70L054	12644	670							2212/0762/012/293c										
20170403	0056	0105	>0112	M1.2/SF	.0082	N15W75L054	12644												R	/0045/006-012					
20170403	1415	1429	1454	2N/M5.8	.031	N19W80L054	12644	6800	100	II/2	IV/1								R	/1422/100-300					
20170703	1537	1615	>1618	M1.3	.004	N03W89L314	12664		140						1724/0256/040/267				R	/1731/012-025					
20170709	0304	0318	0353	2N/M1.3	.013	S08E37L111	12665								g				R2	/0340/050-100					
20170714	0107	0209	0455	M2.4/1N	.13	S06W29L111	12665		130				IV/1						R5	/0314/100-300	14 0900/0022				
20170820	0136	0152	>0203	M1.1	.011	N06E89L225	12672												R	/0157/100-300					
20170904	0536	0549	0629	M1.2/1F	.015	S10W04L117	12673												R	/0601/006-012					
20170904	*1343	1530	<2359	3B/M1.5	.006	S06W13L117	12673	130	100										R	/1526/006-012					
20170904	*1805	1822	>1831	M1.0/3B	.011	S07W11L117	12673								1912/0624/288/333c										
20170904	*1846	1937	>1952	M1.7	.045	S09W10L117	12673						IV/1		1912/0874/016/235c				R2	/1903/026-050					
20170904	*1959	2002	>2006	M1.5	.004	S16W14L117	12673								1912/1077/012/263c										
20170904	*2028	2033	>2359	3B/M5.5	.018	S11W16L117	12673								2048/0803/014/244c				R	/2143/050-100	08 0035/0844				
20170904	2210	2214	>2219	M2.1	.008	S09W12L117	12673								2324/0578/018/226c										
20170905	0103	0108	>0111	M4.2	.010	S09W14L117	12673								0136/0610/012/237c				R	/0101/006-012					
20170905	0342	0351	>0404	M1.0	.011	S09W15L117	12673												R	/0400/006-012					
20170905	0433	0453	0507	M3.2	.051	S11W18L117	12673						IV/2		0524/1227/006/242				R	/0406/006-012					
20170905	0633	0640	0643	M3.8	.010	S11W18L117	12673												R	/0643/006-012					
20170905	1737	1743	1830	M2.3/1N	.012	S09W24L117	12673								1812/0488/028/161				R2	/1755/100-300					
20170906	*0852	0910	>1553	2B/X2.2	.130	S07W33L117	12673	410							1000/0419/042/252				R2	/1123/100-300					
20170906	*1153	1202	>1553	X9.3/2B	.570	S08W33L117	12673	3200	14000	II/2	IV/2				1212/0978/360/001c				R6	/1208/100-300					
20170906	1551	1556	1752	M2.5/3N	.014	S09W38L117	12673												R3	/1606/100-800					
20170906	*1921	1930	1935	1F/M1.4	.009	S08W38L117	12673												R	/1915/100-300					
20170906	*1753	2339	>2359	1F/M1.2	.005	S07W44L117	12673								2124/0495/020/235c				R14	/2301/100-300					
20170907	0459	0502	>0547	M2.4/1F	.007	S07W45L117	12673												R	/0500/100-300					
20170907	<0935	0954	>1128	1N/M1.4	.004	S08W47L117	12673	25000	260		IV/2				1024/0488/018/488c				R2	/0959/100-300					
20170907	1011	1015	>1018	M7.3	.014	S07W46L117	12673	91000	810		IV/2				1136/0388/014/260c				R	/1008/100-300					
20170907	1420	1436	1455	X1.3/2B	.120	S11W49L117	12673	670	1600	II/1					1524/0449/050/244c				R	/1455/100-300					
20170907	2350	2359	0110	M3.9/2B	.036	S09W50L117	12673							IV/2					R	/2351/006-012					
20170908	0219	0224	>0229	M1.3/1F	.004	S09W54L117	12673								0417/0629/028/251c										
20170908	0339	0343	>0345	M1.2/SF	.002	S06W55L117	12673	15000							0428/1080/038/270c				R	/0329/012-025					
20170908	0740	0749	0913	M8.1/2B	.047	S10W57L117	12673		69										R	/0750/100-300					
20170908	1509	1547	1608	M2.9/1N	.053	S08W68L117	12673	450											R2	/1512/100-300					
20170908	2333	2345	>2356	M2.1	.017	S08W69L117	12673						IV/1						R	/2328/100-300					
20170909	0414	0428	>0443	M1.1/SF	.013	S13W69L117	12673								0524/0355/018/271c				R	/0413/100-300					
20170909	1050	1104	1239	M3.7/SF	.071	S14W74L117	12673	100											R2	/1049/100-300					
20170909	2204	2353	0041	M1.1/SF	.069	S07W74L117	12673		450	II/2	IV/2				2312/1077/104/275c				R3	/2236/100-300					
20170910	1535	1606	1631	X8.2	.400	S08W90L117	12673	670	1900	II/1	IV/2				1648/2013/360/144c				R2	/1553/100-300	10 1630/1490	GLE		LPS	
20171020	2310	2328	>2337	M1.1	.009	S12E88L128	12685	110					II/1						R	/2311/100-300					